UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

51206   7590   08/30/2010

TOWNSEND AND TOWNSEND AND CREW LLP/ORACLE
TWO EMBARCADERO CENTER
8TH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER
SYED, FARHAN M

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 08/30/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,805	12/08/2003	Christoph Bussler	021756-002600US	5730

TITLE OF INVENTION: SYSTEMS AND METHODS FOR VALIDATING OBJECTS MODELS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	11/30/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u>   Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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nonprovisional	NO	$1510	$300	$0	$1810	11/30/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
SYED, FARHAN M	2165	707-604000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) :   ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
☐ Issue Fee	☐ A check is enclosed.
☐ Publication Fee (No small entity discount permitted)	☐ Payment by credit card. Form PTO-2038 is attached.
☐ Advance Order - # of Copies _____	☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 806 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 806 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/731,805	BUSSLER ET AL.
	Examiner	Art Unit
	FARHAN M. SYED	2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to _6/8/2010_.

2. ☒ The allowed claim(s) is/are _1-13,15-24,26 and 27_.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

      a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

           1. ☐ Certified copies of the priority documents have been received.

           2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

           3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the

               International Bureau (PCT Rule 17.2(a)).

      * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

/Neveen Abel-Jalil/
Supervisory Patent Examiner, Art Unit 2165

DETAILED ACTION

1.   Applicant's amendments and arguments filed on 13 April 2010 have been fully

considered and they are deemed to be persuasive.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08 June

2010 has been entered. In addition, the 'After-Final' amendment, filed 13 April 2010,

has been entered with this RCE submission.

EXAMINER'S AMENDMENT

3.   Authorization for Examiner's Amendment to the amendment filed 13 April 2010

was given by Mr. Preetam Pagar (Reg. No. 57,684) in a telephone interview on 25

August 2010.

4.   An examiner's amendment to the amendment filed 13 April 2010 appears below.

Should the changes and/or additions be unacceptable to applicant, an amendment may

be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment,

it MUST be submitted no later than the payment of the issue fee.

5.   The application has been amended as follows:

        1.   (Currently Amended) A computer-implemented method of validating

metadata for an object model stored in a database, comprising:

        identifying a first subject of validation, wherein the first subject is one of an

object, an attribute, an association and a collection of objects;

        determining a context of metadata validation based on the first subject, the

context including one of a) the first subject, and b) the first subject and one or more

additional subjects;

        querying the database to retrieve a set of objects requiring validation, the set of

objects determined by the first subject of validation and the determined context;

        querying the database to retrieve one or more validation rules for each object in

the set of objects, the one or more validation rules stored independently from the set of

objects requiring validation, wherein the one or more validation rules retrieved from the
database is based on the context of metadata validation, <u>wherein retrieving the one or
more validation rules includes identifying rules in rule files based on the subject type of
each subject to be validated</u>; and

   applying the validation rules to each object in the set of objects,

   wherein applying the validation rules results in one of partially and completely
validating the metadata for the object model, a partial validating of the object model
allowing an existing portion of the metadata to be validated before all metadata for the
object model is determined, and occurs prior to deployment of the object model, a
deployment of the object model allowing the object model to be used to store data
according to the object model.

   14.   (Canceled),

   15.   (Currently Amended) The method of claim 1 [[4]], wherein each rule file is
a Java file.

   17.   (Currently Amended) A metadata validation system for validating an
object model, comprising:

   <u>a processor;</u>

   a database that stores objects and metadata of the object model;

means for identifying a first subject of validation, wherein the first subject type is one of an object, an attribute, an association and a collection of objects;

means for determining a context of metadata validation based on the first subject, the context including one of a) the first subject, and b) the first subject and one or more additional subjects;

means for querying the database to retrieve a set of objects requiring validation, the set of objects determined by the first subject of validation and the determined context;

means for querying the database to retrieve one or more validation rules for each object in the set of objects, the one or more validation rules stored independently from the set of objects requiring validation, wherein the one or more validation rules retrieved from the database is based on the context of metadata validation, wherein retrieving the one or more validation rules includes identifying rules in rule files based on the subject type of each subject to be validated; and

~~means for~~ applying the validation rules to each object in the set of objects with a computer,

wherein ~~the means for~~ applying the validation rules with the computer provides for both partially and completely validating the metadata for the object model, a partial validating of the object model allowing an existing portion of the metadata to be validated before all metadata for the object model is determined, and provides for the validation occurring prior to deployment of the object model, a deployment of the object model allowing the object model to be used to store data according to the object model.

19.   (Currently Amended) A <u>computer-implemented</u> method of validating

metadata in an object model in a database, the method comprising:

receiving user defined rules, each rule defining a validation rule on a metadata

object, each rule being one of a completeness type rule and a correctness type rule;

storing the validation rules to the database;

identifying a first subject of metadata validation, wherein the first subject has a

subject type selected from the group consisting of an attribute, an association, an object

and a collection of objects;

determining a context of validation based on the first subject, wherein the context

includes the first subject and none, one or more additional subjects;

querying the database to retrieve a set of objects requiring validation, the set of

objects determined by the first subject of validation and the determined context;

querying the database to retrieve one or more validation rules for each object in

the set of objects, the one or more validation rules stored independently from the set of

objects requiring validation, wherein the one or more validation rules retrieved from the

database is based on the context of validation<u>, wherein retrieving the one or more</u>

<u>validation rules includes identifying rules in rule files based on the subject type of each</u>

<u>subject to be validated</u>;

receiving a selection from the user of a type of validation to perform, the type

selected from the group consisting of correctness and completeness;

applying a correctness type validation rule to each object in the set of objects when the selection indicates correctness type validation; and

applying a correctness type and a completeness type validation rule to each object in the set of objects when the selection indicates completeness type validation, wherein applying the correctness type or the completeness type validation rule occurs prior to deployment of the object model, a deployment of the object model allowing the object model to be used to store data according to the object model.

25.   (Canceled).

27.   (Currently Amended) A computer readable <u>storage</u> medium containing a set of instructions that when executed by a processor cause the processor to validate metadata in an object model in a database, the set of instructions causing the processor to perform the steps of:

receiving user defined rules, each rule defining a validation rule on a metadata object, each rule being one of a completeness type rule and a correctness type rule;

storing the validation rules to the database;

identifying a first subject of metadata validation, wherein the first subject has a subject type selected from the group consisting of an attribute, an association, an object and a collection of objects;

determining a context of validation based on the first subject, wherein the context includes the first subject and none, one or more additional subjects;

querying the database to retrieve a set of objects requiring validation, the set of objects determined by the first subject of validation and the determined context;

querying the database to retrieve one or more validation rules for each object in the set of objects, the one or more validation rules stored independently from the set of objects requiring validation, wherein the one or more validation rules retrieved from the database is based on the context of validation, wherein retrieving the one or more validation rules includes identifying rules in rule files based on the subject type of each subject to be validated;

receiving a selection from the user of a type of validation to perform, the type selected from the group consisting of correctness and completeness;

applying a correctness type validation rule to each object in the set of objects when the selection indicates correctness type validation; and

applying a correctness type and a completeness type validation rule to each object in the set of objects when the selection indicates completeness type validation, wherein applying the correctness type or the completeness type validation rule occurs prior to deployment of the object model, a deployment of the object model allowing the object model to be used to store data according to the object model.

Allowable Subject Matter

6.   Claims 1-13, 15-24, and 26-27 and renumbered 1-25 are allowed over the prior art of record.

Reasons For Allowance

7. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 17, 19, and 27, Applicants particular method and associated systems of validating metadata for an object model stored in a database, comprising: querying the database to retrieve one or more validation rules for each object in the set of objects, the one or more validation rules stored independently from the set of objects requiring validation, wherein the one or more validation rules retrieved from the database is based on the context of metadata validation, wherein retrieving the one or more validation rules includes identifying rules in rule files based on the subject type of each subject to be validated; and applying the validation rules to each object in the set of objects; wherein applying the validation rules results in one of partially and completely validating the metadata for the object model, a partial validating of the object model allowing an existing portion of the metadata to be validated before all metadata for the object model is determined, and occurs prior to deployment of the object model, a deployment of the object model allowing the object model to be used to store data according to the object model, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record.

The dependent claims, being further limiting to the independent claims, definite and enabled by the specification are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Neveen Abel-Jalil can be reached on 571-272-4074. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/F. M. S./
Examiner, Art Unit 2165

25 August 2010

/Neveen Abel-Jalil/

Supervisory Patent Examiner, Art Unit 2165